

Appl. No. 10/809,253
Amd. Dated February 23, 2005
Reply to Office Action of October 19, 2004 and to
Notice of Non-Compliant Amendment of February 14,
2005

Amendments to the Specification:

Please replace the first full paragraph on page 10, with the following rewritten paragraph:

In one embodiment of the cholesteric liquid crystal cell unit, the π -phase waveplate element 11 can be integrated into a cholesteric liquid crystal cell by placing the wavelength plate element 11 between the ITO layer 15B and substrate layer 14B of the cholesteric liquid crystal cell 10 of the unit. In this case, the element 11 is best realized as one or more birefringent coatings upon the substrate layer 14B. Alternatively, the waveplate element 11 can be placed between the substrate layer 14A and the ITO layer 15A of the second cholesteric liquid crystal cell 12 of the unit, or the waveplate element 11 itself can be substituted for the substrate layer 14B to serve two functions. The waveplate element 11 might be a quartz crystal plate about 90 μ m thick for the proper phase delay for optical communication wavelengths. In any case, the π -phase waveplate element 11 is functionally between the two cholesteric liquid crystal cells as shown in the Fig. 1 arrangement.

Please replace the second paragraph on page 14, with the following amended paragraph:

It should be noted that the wavelength-dependent filter and the fiber loop 40 provide a double filtering function to better define the wavelength dropped to the user from the network when the cholesteric liquid crystal cell unit is transmitting. If double filtering is ~~not~~ not required, a wavelength-dependent filter could be added to the optical switch of Fig. 4A. In such a case, the optical fibers 23 and 24 become the network input and output fibers and the optical fibers 21 and 22 become the user add and drop optical fibers, respectively.

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